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CROSS-SECTORAL ISSUES, WITH PARTICULAR REFERENCE TO THE CRITICAL ELEMENTS OF SUSTAINABILITY

Letter dated 19 December 1995 from the Chargé d'affaires a.i. of the Permanent Mission of the Republic of Korea to the United Nations addressed to the Secretary-General

It gives me great pleasure to transmit herewith a copy of the report on the Workshop on Policy Measures for Changing Consumption Patterns. Hosted by the Government of the Republic of Korea, this Workshop was held in Seoul from 30 August to 1 September 1995.

The Workshop constituted one of the Republic of Korea's contributions to the preparatory process for the fourth session of the Commission on Sustainable Development. Its conclusions concerning policy measures for changing consumption patterns provide a valuable input to the ongoing work of the Commission.

I would highly appreciate it if you would arrange for the report, which is available in English only, to be circulated as an official document of the fourth session of the Commission under item 3 of the provisional agenda.

(Signed) Wonil CHO
Ambassador, Chargé d'affaires a.i.
Republic of Korea

* E/CN.17/1996/1, to be issued.

Annex

REPORT OF THE WORKSHOP ON POLICY MEASURES FOR CHANGING CONSUMPTION PATTERNS

I. INTRODUCTION

1. In the past decade, we have witnessed a dramatic change in the way in which we view our environment. Overcoming environmental challenges is now emerging as a basic element in all national and international development strategies. The global community has responded to these challenges with efforts to articulate principles and guidelines for sustainable development, as embodied in Agenda 21 programs.

2. The continuing unsustainable trends in consumption and production patterns is undeniably contributing greatly to the continued deterioration of the environment. Thus, changing these patterns has become an urgent item on the global agenda for sustainable development.

3. In response to these developments with the international community, the Government of the Republic of Korea, in collaboration with the Government of Australia, the UN Department for Policy Co-ordination and Sustainable Development, the United Nations Development Programme and the Organisation for Economic Co-operation and Development, hosted an international Workshop on Policy Measures for changing Consumption Patterns in Seoul, Korea from 30 August to 1 September 1995.

4. The vision of this workshop was to promote and facilitate the development of appropriate policy measures for sustainable consumption with the following objectives: to evaluate the problems caused by unsustainable trends in consumption through case studies and discussions; to exchange information and experiences that may assist countries in establishing more effective policies; and to motivate governments, businesses and NGOs to assume their responsibilities and roles required for implementing policy measures.

5. The Workshop proceeded with the following four areas of discussion:

(a) Setting the sustainable consumption agenda;
(b) Developing policy options and instruments;
(c) Targeting the specific policy areas; end-use energy consumption, waste management, consumptive use of water resources;
(d) Sharing responsibility toward the sustainable goal.

6. The Workshop was designed to contribute to the international work programme of the UN Commission on Sustainable Development agreed to at its third session in April 1995. It was built upon a number of earlier events, notably the Oslo Round Tables on Sustainable Production and Consumption (Norway, January 1994 and February 1995), the OECD Experts Seminar at MIT (USA, December 1994), the Workshop on Facilities for a

Sustainable Household (The Netherlands, January 1995), and the OECD Workshop on "Clarifying the Concepts" (Norway, July 1995).

7. The organizing body strived to achieve well-balanced representation from all countries, inter-governmental organizations and NGOs in various aspects. In all, representatives of 24 nations, 5 UN and international organizations, 9 NGOs and many environmental experts participated in this Workshop. The discussions and exchange of ideas by all participants attributed to its successful conclusion. Mr. Henrique Cavalcanti, the Chairman of the third CSD session; Mr. James Speth, the Administrator of UNDP; and Mr. Bill Long, Director of the OECD/Environment Directorate provided valuable insights by sharing their expertise and accumulated experiences as heads of their respective organizations.

8. Based on the presentations and discussions by the participants, the workshop produced the Chairman's Conclusions which presents policy recommendations for changing sustainable consumption patterns. These recommendations are expected to provide the conceptual foundations for policy action, and will hopefully contribute to the establishment of an international workplan to be presented at the fourth session of the CSD in 1996.

II. SETTING THE SUSTAINABLE CONSUMPTION AGENDA

9. The workshop sought to build on work undertaken by intergovernmental organizations, national government and members of the non-government community. In this respect the Workshop acknowledged the outcomes of the Oslo Round Tables on Sustainable Production and Consumption (Norway, January 1994 and February 1995), the OECD Experts' Seminar at MIT (USA, December 1994), and the Workshop on Facilities for a Sustainable Household (The Netherlands, January 1995), and the OECD Workshop on 'Clarifying the Concepts' (Rosendal, Norway, July 1995). The Workshop reflected on the call from the Rosendal workshop for development of common language, increased attention to measurement of consumption and increased understanding of the linkages of consumption patterns to trade, investment, technology transfer and development issues.

10. Reflecting on the importance of international attention to the issue of sustainable consumption, the workshop considered the work of the Commission on Sustainable Development and the need to view sustainable consumption against the background of the global need to reduce poverty. At the national level, the importance of ensuring the complementarity of economic, regulatory and social measures was highlighted. Two types of policy failures, which could contribute to unsustainable consumption were identified: market failure to include environmental costs in prices; and policy failures which resulted in government actions having negative environmental outcomes. The complexity of the relationship between consumption and production highlighted the importance of life-cycle

analysis. Some globalized aspects of the issue suggested harmonized approaches between governments.

11. In sharing national experiences, a presentation on the Norwegian experience emphasized the long term structural changes in the economy and life-styles that were necessary to achieve sustainable consumption. Governments needed to take a wide range of measures, which were described in the context of the Action Plan for Sustainable Consumption which the Norwegian Government is preparing. The Norwegian approach emphasized the need for all groups in society to be involved and to accept their responsibilities. This included NGOs and industry. Provision of information to these groups was emphasized.

12. The Korean experience of rapid growth from the 1960s which had led to high growth in both production and consumption had also produced attendant environmental problems and public demand for environmental protection. Korean approaches to addressing these issues were described as including advances in product regulation and technological improvements. Social measures, especially education from an early age, were identified as essential to achieving sustainable consumption.

13. In the ensuing discussion in this session, there were several main themes. One was to note the limits of some economic instruments, such as taxes in relation to the very poor who might be largely outside the money economy. Another was on the empowerment of social groups, especially women. Women were identified as potentially having a special role in promoting sustainable consumption: as educators of children; purchasers for households; and as a group with particular environmental consciousness. There was discussion on how to deal with structural change in industry, particularly where industries with high environmental costs sought to relocate to developing countries.

14. The meeting recognized that choosing the most appropriate mix of policy instruments to address a particular consumption concern in an individual country was a complex issues facing decision makers. Most effective results could be achieved when environmental considerations were integrated across all areas of national decision making.

15. The meeting recognized that not all types of instruments are appropriate to all situations and decision makers must be guided by local conditions. At different stages in their development countries may choose to emphasize more strongly the economic, social, or environmental aspects of sustainable development. Over time, all elements will be important.

16. Gaining political acceptability for the choice of instruments is an important consideration and requires the concerns of all stakeholder to be addressed. Choosing the most cost-effective instrument can assist in gaining acceptance of policy measures, particularly where the measure offers an incentive to industry to innovate to save material

costs. Accurate information for all consumers is essential to achieving acceptance of any policy measure.

III. DEVELOPING POLICY OPTIONS AND INSTRUMENTS FOR CHANGING CONSUMPTION PATTERNS

17. In the second session, the workshop participants discussed polity options and instruments aimed at changing unsustainable consumption patterns. Four paper were presented that examined the existing policy measures from different perspectives, based on specific national contexts. The advantages and weaknesses of the various instruments were evaluated, followed by reviews of lessons that could be learned and applied in ongoing and future efforts at advancing sustainable consumption.

18. It was pointed out that, since UNCED, considerable changes had taken place in developed countries' attitudes toward changing production and consumption patterns. There was a broadening appreciation among OECD countries that achieving sustainability in resource consumption was in their own interests. This new attitude was accompanied by a growing confidence that major changes in production and consumption patterns could be achieved without threatening economic prosperity and standards of living. Economic growth could be de-coupled from levels of resource use and pollution. Businesses that sought eco-efficiency could also be among the most profitable.

19. Along with this new development was a shift away from focusing exclusively on supply-side management in resource consumption to equal emphasis on both supply-side and demand-side management. The result of such a shift was the increasing involvement of consumers in the pursuit of sustainability in consumption. Significantly, this new emphasis on consumers was not simply confined to households, but also encompassed businesses and governments at different levels, reflecting the increasing recognition that achieving sustainable consumption constituted a common challenge involving the whole of civic society.

20. After highlighting the significance of these developments, which in themselves constituted important steps toward the goal of sustainable consumption, the workshop reviewed recent experiences of policy instruments applied at the national level. Empirical studies suggested that by and large governments have adopted a mixture of regulatory measures (command and control), market-based incentive/disincentive policies (economic instruments) and a variety of education, information and other persuasive means intended to influence consumer behaviour (social instruments). While regulatory measures had been the main instruments adopted in the early efforts at changing production and consumption patterns, governments were increasingly relying on economic and social instruments to bring about sustained changes in consumption patterns while at the same time maximizing the cost-effectiveness of these measures.

21. Country experiences also demonstrated that while command-and-control measures might have been costly in some situations, they have generally been successful in arresting the deteriorating trends in environmental degradation and pollution in a number of areas. Such was the case in reducing emissions and improving ambient air quality, and in cleaning up waste sites and water streams. An important outcome was the protection of public health and widespread acceptance of environmental standards.

22. On the other hand, regulatory measures have had limited or little effect on overall levels or patterns of resource consumption, such as energy and waste generation. Recent criticisms of the cost-effectiveness of such measures in some sectors led to fresh attempts at exploring the further use of other instruments, especially economic instruments that were considered more cost-effective.

23. The use of economic instruments has grown in recent years; from 1987 to 1993, their use increased by large margins in OECD countries, in some cases by as much as 50 percent. This was especially true in the Nordic countries, the Netherlands and the USA. Those of particular relevance to consumption were product charges, including differentiated energy taxes, and various deposit-refund schemes. Of far-reaching significance was the fact that such measures were also being adopted in more and more developing countries, indicating the great potentials of consumer response to incentive mechanisms, despite differences in relative income levels.

24. In some countries, like Sweden, the administrative costs of taxes and charges designed to bring about behavioral changes and/or create revenues had proved strikingly low. Administrative costs incurred in collecting sulfur dioxide and nitrogen oxide accounted for less than 1 per cent of turnover. The direct effects on SO_2 and NOx emissions were however substantial. Given the concerns associated with the introduction of environmental taxes or charges, this experience showed that with proper design and operation, economic instruments could be applied with significant and far-reaching results.

25. Nevertheless, it had to be noted that economic instruments that were also volume-based or -related had been less common in OECD countries, despite the widely-held belief that they were more cost-efficient and tended to yield greater impact on consumer behaviour. Interestingly, a volume-based waste charge scheme was now implemented in Korea. Although country situations might vary, economic analysis suggested that the overall impact of economic instruments such as taxes or charges would be influenced by several common variables, notably elasticities of substitution, supply, and demand. The behaviour of these elasticities would determine to a large extent the responsiveness of producers and consumers to the use of economic instruments.

26. In addition to regulatory measures and economic instruments, the workshop also heard a presentation on social instruments. It was pointed out that alongside these two types of policy instruments, social instruments played an important role in enhancing popular awareness and participation in furthering sustainable consumption.

27. In general, social instruments could include education, both formal and informal, consumer information campaigns, advertising and voluntary agreements. Under information and advertising eco-labelling could also be included, which had been gaining increasing importance recently as an effective means of facilitating behaviour changes.

28. A distinguishing feature of social instruments was the importance attached to the dynamics of stakeholders. Consumers, be they households, businesses or governments, were recognized as actors in their own rights, initiating actions and responding to initiatives at once, carrying on a dynamic process of interactions. While governments may take actions to inform and protect average consumers, consumers themselves may organize themselves into action groups and associations. The eco-teams in the Netherlands organized by the Global Action Plan (GAP), a nongovernmental organization, provided a telling example of how ordinary consumers could take initiatives and put sustainable consumption into daily practice.

29. It was therefore widely recognized that information played an instrumental role in galvanizing the civic society into action. To maximize effect and maintain momentum, information should not only raise awareness but also serve to make people aware of how and what to change in terms of consumption patterns and levels. Furthermore, community-level experiences pointed to the need for putting in place feed-back mechanisms so that consumers could appreciate the progress they were making as well as the impact on the behaviour of other stakeholders.

30. The experience in the Netherlands and other countries, as witnessed in the growing number of consumer initiatives, underlined the empowerment effect of consumers once they were organized. While individual behaviour was always praiseworthy and necessary, it was through group actions that individual effects could be amplified, sustained and reach a wider segment of the civic society. Between the start of the program and the initiation of evaluation, participants in the Dutch Eco-team activities achieved reductions in resource consumption and waste, ranging from 13 per cent (water) to 77 per cent waste, as compared to the average Dutch citizens' consumption level.

31. An issue so far neglected and now gaining increasing recognition as a key condition for sustaining momentum for behavioral changes was the provision of necessary infrastructure and other facilities geared to patterns of sustainable consumption. The availability of and easy access to such "hardware" might well determine the scale and durability of popular initiatives. In this regard, the role of governments in providing and facilitating the provision of such "hardware", through involvement of producers and retailers, was of crucial importance.

32. Recent emphasis on extending producer responsibility toward the final links in the chain of a product's life cycle also pointed to the role of producers in ensuring success in changing consumption patterns. Through negation and persuasion, governments and businesses had come to voluntary agreements on producers' responsibilities in reducing

emissions and effluent, providing environmental information to consumers and guaranteeing or facilitating product disposal through reuse, recovery and recycling.

33. Would changing the present production and consumption patterns through the use of the instruments outlined above affect economic growth, and if so, how? The problem was explored in a paper on long-run scenarios of growth, taking into account the "green" demands for a sustainable economy. The findings of the research suggested that while future production and consumption patterns would be very different from the conventional projections (without incorporating the "green" development demands), annual changes and adjustments would not appear any more dramatic than has been witnessed since the 1950s. The findings also suggested that there was substantial resilience in the economy to allow for gradual adjustment to new conditions for production and consumption.

34. In the subsequent discussion on policy options and instruments, participants further reviewed the strengths and weaknesses of the various instruments. While the analyses of the use of individual instruments in country-specific contexts were considered sound, some participants cautioned against over-reliance on one single instrument that could prejudice the use of others and the enhanced impact of a combination of instruments in the light of specific conditions. It was further pointed out that use of the appropriate mix of instruments could be integrated into ongoing structural adjustment programs, and be used in conjunction with the phasing-out of subsidies that work against sustainable consumption and production patterns.

35. On the issue of the cost-effectiveness of innovative measures, participants felt that both cost-reduction and great synergy could be achieved if existing mechanisms and facilities could be used, such as incorporating consumption patterns into conventional household expenditure surveys.

36. In evaluating the distinct features of the policy instruments under discussion, it was suggested that despite the recent tendency to move away from command-and-control to economic instruments, some inherent problems associated with the latter should not be underestimated. For instance, economic instruments tended to be adopted only when significant damage to ecosystems had already occurred. Furthermore, the lack of response to some taxes and charges because of the low level at which they had been set also indicated that considerable difficulties existed in resource pricing. In the absence of a market in environmental resources, such difficulties were likely to remain.

37. Turning to the international level, some participants expressed the concern that developing countries had been mainly left outside the studies on the various instruments, although their application should be relevant under many circumstances. Of significance was the lack of resources in developing countries to collect basic data and information that underpinned the design of policy instruments and the urgent need for external support in this undertaking. It was further pointed out that given the globalization of environment problems, innovative instruments could also be applied in the global context, such as pooling of

emission rights based on the sink functions of the global commons, a concept relevant to the recent emphasis on environmental space, eco-footprints and eco-efficiency.

IV. TARGETING THE SPECIFIC POLICY AREAS

38. At its third session, the Workshop examined the experiences of various countries in applying policy measures to specific practical sectors and lessons learned from the experiences. Four specific areas of consumption were discussed:

A. End-use energy consumption

39. The Chinese experience in energy consumption focused around the high dependency of the Chinese energy structure on coal. It was noted that coal was a major local resource that accounted for 76% of primary energy consumption and 51% of end-use energy consumption. Coal was also expected to remain a major energy source for many years to come.

40. In dealing with the environmental implications of this, China plans to improve its energy structure by constructing hydropower and nuclear power plants, as well as by strengthening the management of coal-fired thermal power stations through reducing coal consumption per unit of output, reducing polluting emissions, and improving or replacing existing power plants in more than thirty major cities.

41. In discussion, concern was expressed that energy pricing policies were, in many cases, largely influenced by the fear of inflation, even though there seemed to be a strong consensus that energy subsidies should be removed. Many participants at the workshop agreed that continued energy subsidies would encourage inefficiency in the allocation of resources. It was also pointed out that the current estimates of coal reserves were somewhat misleading. The usable reserve would be only 25-30% of the known estimate, and thus planners must be cautious when making long-term policy decisions.

42. The U.S. experience was addressed next, where it was emphasized that the following factors were crucial for changing end-use energy consumption patterns:

43. Policy interventions must work with market forces, and as consumer preference was a critical aspect of the success of policies to change consumption patterns, it was important to change consumers' behaviour at a fundamental level. This could be achieved through education and the dissemination of information to the public about the importance of and ways to conserve energy, and hence relieve pressure on the environment and natural resources. The role of grassroots movements and NGOs was particularly important in this regard.

44. In its role as a major consumer, government can contribute to the acceleration of changing consumption patterns by moving faster towards adopting more environmentally friendly and sustainable energy consumption patterns. To expedite this process, sharing experience of policies and seeking common goals amongst governments through international cooperation was vital to the success of such efforts.

45. During the discussion on this topic, some participants encouraged greater effort from developed countries, particularly the USA, in reducing greenhouse gas and other emissions. It was noted that this was indeed the goal of the USA for domestic reasons, as well as to meet its responsibilities toward the global commons. It was also pointed out that due to the rapidly growing share of energy consumption of developing countries, it would not be long before the greenhouse gas emissions from developing countries exceeded that of developed countries.

46. Transferring environmentally sound technologies from developed to developing countries was recognized as an important means to reduce total emissions. Sharing costs and benefits through international cooperation, for instance under a joint implementation program, could also be effective in achieving this common goal.

B. Waste Management

47. In this session, two case studies in waste management were presented: the German and Korean experiences. In one sense, the two countries dealt with the waste management challenge very differently, but there were also similarities.

48. The main feature of the German approach was the use of ordinances, or laws, that assign the duty of minimizing waste generation by measures of waste avoidance and waste recovery to industry and retailers. The best known of these ordinances is the Packaging Ordinance of 1998 which obliged producers and distributors to take care of the recycling of used packaging outside the general waste management system. By implementing these ordinances, the Federal German Government is trying to implement a kind of "product responsibility" which covers the responsibility of a product, not only before, but also after its use.

49. As its principal tool for controlling waste generation, the Korean government launched a policy of volume-based fees for waste disposal in January 1995. This new waste-collection fee system was designed to provide households and firms with a strong economic incentive to reduce waste generation. Percentage reductions in waste collection following implementation of this system have been significant (more than a third), yet are not considered successful enough to achieve sustainable consumption. Real success can be achieved only by complementing this new fee-based policy with other policy measures.

50. Both the German and Korean approaches are similar in that price instruments are used in order to create positive incentive for economic actors to take the environment into account in their decisions. German consumers pay for the packaging material when they purchase a product; in Korea, households and businesses pay for waste disposal based on the volume of the waste they produce.

51. One common lesson to be learned from these two countries' experiences is that a well designed policy mix is the key to success. As the Korean Government realized during the implementation of their volume-based fee policy, price instruments alone cannot do the job. Public acceptance and the availability of the proper facilities and infrastructure are equally important. Both studies showed that complementary facilities lagging behind the implementation of policies undermine the effectiveness of incentive mechanisms and can even threaten (as in the case of Germany) the acceptance of the policies concerned. In both cases, the need for sufficient recycling capacity was mentioned. Korea also feels a need to build incineration plants in order to decrease the percentage of waste (currently 90%) going to landfill.

52. A second common lesson to be learned from these two countries is that both timely and extensive research on technical issues and consumer response are needed, preferably prior to the implementation of policies. In Germany, it would have helped to know somewhat earlier in the process that the German consumer would like separating and sorting so much. In Korea, it would have helped to have foreseen and prevented the problem of plastic bags which, not being naturally decomposable, has created a new threat to the environment.

53. During the Workshop discussions of the topic, concern was expressed about the possible negative repercussions of the suggested policies. It was noted that while the German policy had been effective in reducing waste generation, it may also have resulted in denial of market access for, particularly, less developed countries. It was also noted that increasing incineration capacity, one of the proposed solutions, might run counter to recycling goals and could even contribute to other problems, such as disposed toxic sludge and incineration ash disposal, as well as air pollution.

C. Consumptive use of water resources

54. Three presentations, from Australia, France, and the perspective of the UN Environment Programme, emphasized that water is a scarce world resource which should not be regarded as a "free commodity", but rather as an economic good with a real price-tag attached. Increased per capita consumption and population growth was resulting in an increasingly unsustainable use of this precious resource.

55. Expansion in irrigation, among other things, has been a significant factor contributing to pressure on the water supply. It was suggested that around 70% of the world's total use

of water is consumed, by irrigation for agricultural purposes. Therefore, the key to successful water management, and thus progress toward the sustainable use of water, lies in the careful management of the agricultural demand for irrigated water.

56. It was proposed, based on the Australian experience, that capacity sharing and keeping detailed water accounts might be an effective way of distributing limited water resources when there were a small number of allocation holders. Capacity sharing, a cap on total diversions, with well defined water property rights would increase the efficiency of water allocation. Pricing and labelling policies were also important in relation to consumers. It was also noted that the principles of integrated catchment management should be explored for the success of achieving sustainable use of both land and water. Strong and consistent leadership from government, supportive rural adjustment and social policies, and community participation were crucial in this regard.

57. The French experience led to the conclusion that the full application of the "Polluter-pays Principle" on water effluent charges could be used effectively to change the current water consumption pattern. It was also suggested that empowerment of local authorities could promote efficient allocation and management of water resources.

58. From the perspective of the UN Environment Programme, a progressive rate structure of water prices was regarded as possibly the most effective tool to achieve the sustainable use of water. Marginal cost of water that increases with quantities would effectively discourage excessive consumption of water while ensuring affordable access to water for basic needs. Subsidies on water consumption should be removed, whenever possible, since they distorted the price structure of water

59. It was also pointed out that modern technologies could provide much more efficient equipment in many applications of water. Policy should provide means of installing those technologies and also induce further research in water saving appliances. Regulations requiring minimum standards for devices and appliances could help to reduce waste.

60. All three presentations strongly emphasized that the proper pricing of water was the single most important policy for sustainable management of the water resource. Prices must account for the full costs of supplying and preserving the quality of water and maintaining the resource base. This includes capital, operating, social and environmental costs. Efforts must be made to value environmental and social costs in monetary terms which should reflect people's preferences and willingness to pay.

61. During the discussion on this topic, a suggestion was made to use intermediaries (real estate agents for example) to raise pubic awareness on this issue and other consumption issues like energy. It was also noted that accelerated dissemination of information on new environmentally friendly technologies (such as water saving shower heads and toilets for example) could promote movement toward sustainable patterns of water use.

62. The Workshop participants acknowledged that real tensions can and do exist where two or more countries share common water resources. The control of a river by one country resulted, in many cases, in the loss of agricultural and other types of water use in neighboring countries that share the same river system. It was suggested that a proper capacity sharing system needs to be established, even though this might take a long time.

D. Urban/land-use planning

63. In the final sector-specific topic in this session of the Workshop, there were four presentations, from Canada, India, Indonesia, and the United Kingdom. All the presentations agreed that the inefficient use of land and un-coordinated urbanization could jeopardize the sustainability of the earth.

64. The research originating in Canada suggested that reducing the "ecological footprint" of consumption was essential for achieving sustainable consumption of resources. To achieve this goal, it was stressed that there was a need for tax reform implemented jointly with the removal of subsidies to technologies that created a large ecological footprint. Revenue from ecological taxes should also be invested, at least in part, in rebuilding natural capital stocks.

65. The need for a fundamental changes in the way human beings sustained their lifestyle was also emphasized. Ways of fulfilling peoples needs have to be changed dramatically. In this regard, the goal of sustainability would be better served by investing in social capital rather than in innovations in technology.

66. Both Indian and Indonesian experiences in urban/land-use management yielded a common lesson, that urban/land use problems in many places have been exacerbated by inefficiencies in the urban land market and by private sector development occurring in an uncoordinated fashion. Urban/land use planning must, therefore, be sufficiently attuned to the geographical variations of development and local environmental conditions if they are to efficiently address the challenges that lie ahead.

67. In facing these challenges, the effectiveness of such planning can be improved by (i) increasing the relevance of urban/land use plans by linking proposals for land use with economic and social development and environmental management proposals; (ii) evolving development portfolios on the basis of carrying capacity and conserving bio-diversity and plant genetic resources; (iii) adopting preventive rather than curative strategies; and (iv) preparing and disseminating guidelines and a manual for urban spatial use management. The British experience yielded a lesson that every effort must be made to ensure transparency of policy by encouraging public involvement in the planning process from the very beginning.

68. In the ensuing discussion on this topic, it was urged that close attention must be given to future trends in transportation needs. Concern was also voiced about the possible drawbacks of a transition toward denser cities through urbanization. In response to this

concern, it was noted that density itself should not be a problem since dense cities with good transport systems would have the smallest ecological footprint. The way in which urbanization could result in the drainage of funds from rural sector, as a result of migration toward cities, was also expressed. This would result in the lack of funds to manage the rural environment.

V. SHARING RESPONSIBILITY TOWARD THE SUSTAINABLE GOAL

69. The final substantive session of the workshop examined the respective roles which the business community, Governments, non-governmental organizations (NGOs), and individual citizens could most effectively play in helping to move toward the goal of more sustainable consumption.

70. The global business community, or at least leading international corporations, have for some years recognized the challenge and opportunity presented by the need to minimize energy and raw material use and wastes production, whilst remaining competitive. The goal of the World Business Council for Sustainable Development (WBCSD) in undertaking a work programme on sustainable consumption and production is to help extend the message of "doing more with less" both horizontally- by spreading sustainable production practices to an increasingly large group of industries and service sectors - and vertically - by infusing sustainable practices into the full range of a firm's activities.

71. The WBCSD's three-part work programme was focused on: (i) the definition and boundaries of the subject; (ii) how to move from cases to models of sustainable practice, and at the same time identify barriers faced by business; and (iii) developing Recommendations for Governments and business on how sustainable practices can best be widely and successfully adopted. Recent activities have included Expert Workshops on "Product Life Optimization" (Boston, USA, July 1995) and on the "Role of Environment in Advertising and Marketing"(Oslo, Norway, August 1995). These meetings provided valuable insights into how companies were already moving forward in areas such as enhanced service benefit, design for upgrade, leasing, remanufacturing, and disassembly. Advertising and marketing techniques used by companies frequently utilize the environment either to enhance corporate image, or as a specific selling point. The business community needed to use such techniques responsibly to influence consumer behaviour and preferably to encourage more, rather than less, sustainable patterns of consumption, by educating consumers rather than aiming solely to increase market share.

72. Technological innovation, cultural and behavioral change and new policy approaches were needed to advance current industrial practice, as well as to modify consumption patterns. Some of the major opportunities and challenges faced by business were product life optimization, the role of business as an agent for change in the markets, where its influence as both a supplier and customer was crucial, and the relationship between industry practices

and public policy. The question of which performance indicators needed to be developed or utilized at both firm and national/international levels, in order to help industry move towards more sustainable production and consumption, was also an important one to address.

73. Turning next to the role of Government, particularly in its role as a major consumer, the workshop heard about the Japanese Government's "Action Plan for Greening Government Operations", approved in June 1995 within the framework of the Japanese Basic Environment Law and Basic Environment Plan. This initiative was seen as consistent with the priority already being given to this issue in other countries of the "G7" (the seven most advanced industrialized economies), such as Canada and the UK. It was also designed to make a significant contribution to moving Japan towards a more sustainable pattern of consumption. The Government of Japan was the biggest single consumer in the national economy, responsible for 2.2% of Japanese GDP in 1993.

74. The Action Plan was comprehensive in its coverage, applying to all (central) Government Ministries and Agencies and to all Governmental activities affecting the environment. It also included 37 specific targets, of which 11 were quantitative. The issues embraced by the Plan were:

(a) Purchase and use of goods and services;
the construction and maintenance of buildings;
(b) Administrative activities (such as energy and water use in offices, use of vehicles, recycling, pollution prevention);
(c) Training programmes for Government officials (to raise awareness and encourage action); and,
(d) Development of an effective mechanism for implementation and review of the plan.

75. The decision to develop a plan of this kind reflected the recognition in Japan that, at present, there was inadequate cooperation on environmental issues between Government Agencies, especially on the "greening" of their own activities and, second, that the daily office life of Government officials was not currently an environmentally friendly one. Two key messages were important to convey from this workshop to national Governments: the need to establish Action Plans as a strategic policy measure, and the vital need for a sharing of information and experience amongst national governments, as well as between Government and other sectors.

76. The role of consumers, other non-governmental organizations (NGOs), and individual citizens was examined next, in a paper on the Indian experience in this field. This noted that NGOs, from small community groups to large organizations, have several important attributes which made them crucial actors in the move towards more sustainable consumption: credibility among local people because of their independence; being composed of individuals committed to organized social action; and the ability to reach many

constituencies with their messages and to involve them in the design and implementation of projects.

77. NGOs were thus equipped for campaigning, to press for national and international policy changes towards sustainability, and for encouraging individuals to take personal responsibility for changing their consumption patterns and those of their communities. To this end, the consumer movement has an important role to play in the area of sustainable consumption. Consumers International, a federation of 205 consumer organizations in over 80 countries, has been active in recent international discussions on how to achieve more sustainable consumption and production patterns. The organization espoused four basic ways for consumer organizations to promote the goal of sustainable consumption: by educating and informing consumers about the environmental impact of their choices and pointing them towards environmentally sounder product selections and lifestyle choices by including regular and thorough environmental assessment of products and services in comparative testing and surveys; by advocating the consumer interest in public policy debates; and, by advocating high environmental standards of performance for products regardless of whether the products were domestically made or imported.

78. Many examples already existed of national consumer organizations taking action to promote more sustainable consumption: the Consumers Union of the US project on assessing the environmental impact of cars; the Dutch organization Consumentenbond testing the recyclability of TV sets; and the Korean Citizens Alliance for the Protection of Consumers (CACPK)'s ambitious programme on energy reduction, which included consumer education

79. It was important that Governments still played the leading role in moving societies towards sustainable development in general and sustainable consumption in particular. But at the same time, NGOs should be willing to shoulder certain responsibilities and duties.

80. In the ensuing discussion, some of participants stressed that, while business and NGOs seemed to be on the right track, a major concern existed on the role of Governments as consumers. The importance of developing plans for action at the appropriate administrative level was also emphasized. In Thailand, for instance several local-level action plans for more sustainable resource use had failed, and were now being developed at the provincial-government level, involving a wide range of stakeholders. But more generally it was seen as essential that conflicts or inconsistencies in Government policies which contributed to over-consumption should be avoided, for instance subsidies which harmed the environment. There was also a real need to evaluate consistently and comprehensively the potential economic and social consequences of policy measures proposed for changing consumption patterns.

81. Participants also stressed the importance of encouraging small and medium-sized enterprises to work towards more sustainable consumption and production patterns and highlighted the value of large companies using their supply chains to help to achieve this. It

was suggested that business also had a responsibility to participate more actively in eco-labelling schemes.

82. In conclusion, in was generally accepted that, while Governments, the business community and NGOs each have distinctive roles to play (which would vary between countries at different stages of development), a basic level of agreement on the overall trajectories needed to move societies towards more sustainable consumption patterns and how the different sectors of society should work in partnership to this end, was essential. Such partnerships therefore needed to be strongly encouraged.

VI. CHAIRMAN'S CONCLUSIONS

83. The Government of the Republic of Korea, in collaboration with the Government of Australia, the UN Department for Policy Co-ordination and Sustainable Development, United Nations Development Programme and the Organisation for Economic Co-operation and Development, hosted an international workshop on Policy Measures for Changing Consumption Patterns in Seoul, Korea from 30 August to I September 1995.

84. The workshop was designed to contribute to the international work program of the UN Commission on Sustainable Development agreed to at its third session in April 1995. It built upon a number of earlier events, notably the Oslo Round Tables on Sustainable Production and Consumption (Norway, Janusy 1994 and February 1995), the OECD Experts Seminar at MIT (USA, December 1994), the Workshop on Facilities for a Sustainable Household (The Netherlands, January 1995), and the OECD Workshop on "Clarifying the Concepts" (Norway, July 1995).

85. After a series of introductory presentations from national governments and the UNCSD on Setting the Sustainable Consumption Agenda, the workshop examined policy options and instruments based on case studies of their application in a number of specific policy sectors:

(a) End-use energy consumption;
(b) Waste management;
(c) Use of water resources;
(d) Urban/land use planning.

86. The following conclusions are those which the Chairman, the Assistant Minister of Environment of Korea, Dr. Chin-Seung CHUNG, considers could best illuminate future work on changing consumption patterns by national governments, the UNCSD, and other international organizations.

A. Common themes

87. Recognizing that prevailing patterns of production and consumption are a primary cause of detrimental local and global environmental change, and based on the Workshop discussions with a sector-specific focus, a number of common themes emerged:

(a) An appropriate mix of instruments which can include regulatory, social and economic instruments (including subsidy removal and ecological tax reform) are needed in each sector, together with complementary policies.

(b) Movement towards proper pricing for the use of natural resources, and removal of subsidies, will assist in the achievement of more sustainable patterns of consumption.

(c) Government regulations that are designed to facilitate product and process innovation can accelerate the diffusion of ecoefficiency.

(d) Education on environmentally responsible consumption helps to create an appropriate climate for change; it should embrace technical and management skills as well as schooling.

(e) Government policy objectives should be clear, consistent and coherent.

(f) Institutions responsible for policy development, natural resource management, and operational activities should each have clearly defined functions and an appropriate system of accountability.

(g) Because of the extensive infrastructure already in place in major economic sectors such as energy, transportation, freshwater, and wastewater as well as the need to resolve conflicts among stakeholders, changing resource use patterns through the implementation of new policies may take considerable time.

(h) Decentralization of responsibilities for sustainable resource management, where appropriate, increases the effectiveness of many policies.

(i) Partnerships among government agencies, private sector firms, voluntary organizations, and individual communities should be encouraged.

(j) Human resources development and institutional capacity building are needed to support sector-specific policy implementation.

(k) The principle of extended producer responsibility, in the light of life-cycle analysis, could usefully underpin specific policy measures in materials

extraction, product design, product information, waste management, and energy efficiency programs.

(l) Increasing understanding among different stakeholders as to the dimensions of problems and their possible solutions can be facilitated by the use of multisector simulation models.

(m) International cooperation in sharing experiences with the use of policy instruments and in facilitating the transfer of finance and technology will accelerate the process of changing to more sustainable consumption and production patterns.

(n) Resource distribution patterns locally, nationally, and globally need to be equitable if they are to be sustainable.

B. Sector-specific themes

88. In the light of case studies of specific fields discussed during the Workshop, a number of sector-specific themes emerged as important for the success of policies to achieve more sustainable consumption patterns. These were:

End-use energy consumption

(a) Policy interventions must help to remedy the limitations of market forces. Broader application of full-social-cost pricing for energy services (in order to better reflect environmental impacts), and utilization of the free market to meet energy service demands, can contribute to the achievement of more sustainable energy consumption patterns.

(b) Changing consumer preferences is critical for the success of policies to influence consumption patterns. This points to the importance of information and education campaigns, and a critical role for grass roots and NGO efforts.

(c) Policies to change energy consumption patterns must address both personal behaviour (which creates a demand for energy services) and the technology characteristics of that energy service, including its structure of production.

(d) A long-term focus on technology development and diffusion is required to ensure that technologies are available which minimize environmental impact whilst facilitating sustained economic growth.

Waste management

(a) The primary goal of waste management is to minimize the production of waste. The implementation of regulations, economic instruments and voluntary agreements directed at producers and distributors can each help to avoid waste generation and promote waste reuse and waste recycling.

(b) The life cycle approach applied to waste management needs to be promoted by various voluntary, regulatory, or economic measures, accompanied by the building of adequate facilities and public awareness campaigns.

(c) The gap between responsibility for the production and distribution of goods on the one hand, and the management of consumer waste on the other, can be narrowed by implementing "extended producer responsibility". This can ensure that producers and distributors of products have to participate in product recycling, and is also a useful way of changing consumer perceptions.

(d) Effective pricing policies can result in better waste management, especially reduced waste volumes, as in the case of the Korean Volume-Based Waste Fee System.

Consumptive use of fresh water resources

(a) Proper pricing of water, for all users, is crucial; over time prices charged must account for the full costs of supplying and preserving the quality of water and maintaining the resource base, as well as its scarcity. This includes capital, operating, social and environmental costs.

(b) Integrated watershed management approaches can be very effective in managing water resources as a unique entity, and achieving more sustainable management of irrigation systems, particularly if accompanied by rural adjustment policies that transfer water to more productive use and ensure long term profitability for farmers and other water users.

(c) Effective and equitable water allocation policies are important for shared river systems. Worthwhile approaches can include capacity sharing, capped diversions and the establishment of water markets and trading.

(d) Information and education efforts that explain the value of and methods for conserving water are needed at all levels of society and for all types of water consumers. There is a need to change consumer perceptions of water as a resource and thus to reinforce the benefits of water pricing and adoption of new technologies.

Urban/land use planning

(a) Land use is an important form of consumption. An efficient and responsive land use planning system, which balances the interests of the individual and society, is essential for sustainable development. It should allow the public to be involved in order to ensure transparency of decision-making.

(b) Urban land use planning policies must be sufficiently attuned to specific local environmental conditions and development considerations.

(c) The relevance of urban land use plans is increased by linking proposals for land use with economic and social development and environmental management.

(d) Guidelines and manuals for urban land use management which include guidance on potential implications for consumption patterns should be developed and disseminated.

(e) In designing urban planning and development policy, governments should recognize that the sustainability of urban economies and population is increasingly dependent on the sound management of land resources far beyond the boundaries of cities per se, often in other countries. The "ecological footprints" of industrial cities are typically one to two orders of magnitude larger than their political or geographic boundaries.

C. The responsibilities of various actors

89. Recognizing the many and varied roles of government, business and NGOs in influencing consumption patterns, the Workshop discussions led to the emergence of the following conclusions:

Role of Government

(a) Conflicts or inconsistencies in government policies that contribute to overconsumption should be removed or avoided (e.g subsidies which harm the environment).

(b) The range of economic and social consequences of policy measures proposed to effect changes in consumption patterns should be consistently and comprehensively evaluated (e.g. trade, investment, competitiveness, employment).

(c) Governments should establish comprehensive action plans for the "greening" of their operations, including the setting of quantitative targets to change their consumption patterns.

(d) Such a governmental action plan could cover:

i. The procurement of goods and services;

ii. Construction and maintenance of buildings;

iii. Administrative activities effective training of Government officials;

iv. Mechanisms for review.

(e) Local government, other public sector organizations and intergovernmental organizations should also consider developing plans for "greening" their operations. Governments can actively encourage them to do this.

(f) There is an urgent need for Governments to share information and experience in this field amongst themselves as well as with other groups in society, including NGOs.

Role of Business

(a) Business has a leading role to play in shaping more sustainable patterns of consumption, by acting as an agent of change in the market, and by virtue of its role as a major consumer of goods and services.

(b) Technological innovation and product life optimization, when pursued by business, are a means of increasing competitiveness whilst reducing environmental impact.

(c) Marketing and advertising techniques when applied by business can encourage more sustainable patterns of consumption.

Roles of NGOs and Citizens

(a) Consumer organizations and other NGOs have an important role to play in undertaking innovative initiatives for changing consumption patterns,and can also support efforts by governments and business to:

i. Design and promote environmental policies, keeping in mind the views and well-being of individual consumers/citizens;

ii. Internalize environmental costs whilst taking care to protect those members of society least able to bear the burden;

iii. Promote (1) the dissemination of reliable environmental information; (2) the sound environmental labelling of products; (3) reliable environmental claims and symbols; and (4) implementation of policies for recycling and separate waste collection when needed

(b) NGOs can in addition encourage:

i. Consumer awareness and action to change consumption patterns and thus the production of less environmentally harmful products;

ii. An environmentally friendly ethos in society, as well as discouraging perceptions and patterns which degrade the environment;

iii. Effective waste prevention programs aiming at reducing the quantity of materials used in products and packaging; unavoidable wastes should be capable of re-use or recycling; efforts to reinvent and redefine concepts of "civil society" by helping individuals join the decision-making processes and give expression to social values, many of which are not captured by the market;

iv. The entire population, including major groups such as women, youth, and children, and those groups whose participation in market processes is most fragile, to help develop and promote visions of a sustainable society.

(c) Workshop participants strongly encouraged citizens to take the environment into account in their day-to-day decisions, a process which should gradually become easier and more automatic if governments, business, and other actors in society implement the policy measures described above.